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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,613

10/03/2006

Gert Mucke

MUCKE

1622

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NEW YORK, NY 10017

EXAMINER

GERIDO, DWAN A

ART UNIT

PAPER NUMBER

1797

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/599,613	<b>Applicant(s)</b> MUCKE ET AL.	
	<b>Examiner</b> Dwan A. Gerido, Ph.D.	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10-3-2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 15 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. For claim 15, it is unclear as to what applicant regards as resonant frequencies. For the purposes of examination, resonant frequencies will be regarded as any frequency applied by an oscillator.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 14, 15, 21, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kush et al., (US 4,477,287).

6. For claims 14, and 27, Kush et al., teach a method for removing a liquid from the surface of a strip wherein the liquid is excited by oscillation (abstract, column 2 lines 13-20, 45-57). The method of Kush et al., is being read on the claimed oscillation in that passing a high velocity of gas across the surface of a strip would generate oscillations in liquid remaining on the strip prior to application of the high velocity gas.

Art Unit: 1797

7. For claim 15, Kush et al., teach liquid oscillating at resonant frequencies.
8. For claim 21, Kush et al., teach removal of liquid as the strip moves (column 2 lines 45-57).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1797

12. Claims 16-19, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kush et al., (US 4,477,287) in view of Meissner (DE 40 09 721).

13. With regards to claims 16, 17, 25, and 26, Kush et al., teach flow of a gaseous stream over a moving strip (abstract, column 2 lines 13-20, 45-57), but does not teach flowing a fluid stream of a strip.

Meissner teaches a method for removing a liquid from a strip wherein a fluid stream is utilized to impart oscillation of the liquid on a strip (page 2 paragraphs 1 and 2). The fluid flow as described by Meissner would be expected to exhibit laminar flow as Meissner does not recite turbulence within the system (page 2 paragraphs 1 and 2). It is advantageous to utilize a liquid stream as a means of removing particulate matter as well as liquids on the surface of a strip.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kush et al., in view of Meissner in order to remove liquid and particulate matter from a strip.

14. With regards to claims 18 and 19, Meissner teaches indirect oscillation of the strip (page 2 paragraphs 2 and 8).

15. Claims 20, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kush et al., (US 4,477,287) in view of Meissner (DE 40 09 721) as applied to claim 16 above, and further in view of Azar (US 6,890,390).

16. With regards to claims 20 and 22, Kush et al., in view of Meissner do not teach a method of evaporating a liquid utilizing sonoluminescence.

Azar teaches a method for ultrasonic cleaning comprising measuring sonoluminescence in a liquid sample (column 10 lines 21-28). Azar teaches that it is advantageous to utilize

Art Unit: 1797

sonoluminescence as a means of measuring a target pressure applied to a surface of a substrate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Meissner in view of Azar in order to measure peak pressure applied to a surface of a substrate as taught by Azar.

17. With regards to claims 23, Meissner teaches a method for removing a liquid from a strip wherein a fluid stream is utilized to impart oscillation of the liquid on a strip (page 2 paragraphs 1 and 2). The fluid flow as described by Meissner would be expected to exhibit laminar flow as Meissner does not recite turbulence within the system (page 2 paragraphs 1 and 2).

18. With regards to claim 24, Kush et al., teach liquid removal as the strip moves (column 2 lines 45-57).

19. Claims 28-32 rejected under 35 U.S.C. 103(a) as being unpatentable over Kush et al., in view of Miyake et al., (US 5,736,100).

20. With regards to claim 28, Kush et al., teach a blowing nozzle, but does not teach the device comprising a sound wave generator.

Miyake et al., teach a chemical analyzer comprising a sound wave generator configured to introduce sound waves into a fluid (abstract, column 5 lines 37-49). Miyake et al., teach that it is advantageous to utilize a sound wave generator as a means of circulating fluids within a vessel. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kush et al., in view of Miyake et al., in order to provide a means for fluid circulation as taught by Miyake et al.

21. With regards to claims 29 and 30, Miyake et al., teach a chemical analyzer configured to introduce sound waves into a fluid (abstract, column 5 lines 37-49).

Art Unit: 1797

22. With regards to claims 31 and 32, Miyake et al., teach the sound wave generator as a piezoelectric sound wave transducer (column 5 lines 37-40).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwan A. Gerido, Ph.D. whose telephone number is (571)270-3714. The examiner can normally be reached on Monday - Friday, 9:00 - 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lyle A Alexander/  
Primary Examiner, Art Unit 1797

DAG